

Learning from TRANSFORMING THE COMMERCIAL SECTOR

By JANICE M. GRAHAM



Computer assembly line
in Austin, Texas.

Dell Computer Corporation

The Secretary of Defense created the Office of Force Transformation in November 2001 to prepare the Armed Forces for the uncertainties of the 21st century. This institutional step

followed other indications that significant change was afoot. In the past year the President, Vice President, and Secretary have cited the requirement to shift from a slow, heavy force to smaller, more lethal, more maneuverable capabilities that can better confront terrorism and other threats.

Vice Admiral Arthur Cebrowski, USN (Ret.), has been assigned to direct this new office. A former president of the Naval War College, he is known as a revolutionary thinker who is likely to go beyond mere tinkering on the margins. As Cebrowski organizes a staff, delineates a charter, and builds a constituency, the enormity of his job cannot be overstated. Not the least of the tasks ahead will be convincing large segments of the defense establishment that military transformation is critical to continued U.S. dominance.

Critics of transformation claim that the military performed well in Afghanistan and adapted to asymmetric warfare. But supporters of military transformation point out that the Central Intelligence Agency, not the Armed Forces, was first to use unmanned combat aerial vehicles and other innovations. Exactly what constitutes transformation and how it can meet the challenges of the future will define the mission of the Office of Force Transformation.

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What Is It?

Transformation was advanced by the U.S. Commission on National Security/21st Century, which reported that geopolitical realities in the wake of the Cold War and technological, social, and intellectual developments in the information revolution have not been met by institutional change. The commission also found that no strategic planning process exists to specify goals and priorities. Its report recommended overhauling DOD organizations and procedures. A study group known as the McCarthy Panel was convened in March 2001 by the Secretary. Leveraging work by the commission, it acknowledged that requirements changed with the demise of the Soviet Union, including an ability to dominate operations from strategic nuclear deterrence to humanitarian relief, with fewer casualties and minimum unintended damage. The panel reported that although the Armed Forces are the most capable in the world, transformation should build on the existing military to create more responsive conventional capabilities. It defined transformation as a process of

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change that develops new operational concepts, determines which ones work, and implements them.¹ Specifically, it connotes change in organizing, training, and equipping forces; doctrine, tactics, techniques, and procedures; military leadership; and interacting to produce effects in battles and campaigns.

Cebrowski has advanced the notion that transformation is not a destination, but a process. It is not necessarily about new technologies, weapons, or platforms; instead it might utilize existing systems in ways that their designers did not envision. More enlightening is the inclination to view transformation through the lens of corporate strategy, risk management, and organizational rules. Lessons from transformations of large organizations suggest that approach is correct.

Organizational transformation reveals a common thread—the challenge is changing attitudes. The greatest task will be surmounting the complacency, inertia, and inward focus of the defense establishment. Rigid hierarchies, redundant staffs, and information flows that center decisions on the highest levels pose the most difficult challenges. Achievements in military transformation will depend on convincing DOD that it is operating in the information age—not the industrial age—and thus can no longer function according to obsolete management and organizational practices.

Achieving Success

Industries that succeed in the long term usually concede that what made them successful in the past will not guarantee future progress. Experience offers a measure to gauge discontinuities, understand the present, and place it in context; but it reveals little about what to expect.

The interplay of systems that characterizes the world is becoming increasingly complex, so one must learn to live with chaos and uncertainty.

Chaos does not mean a random chance world. In a mathematical context, chaotic systems are defined as deterministic phenomena characterized by specific properties that produce patterned yet unpredictable outcomes. The significance of chaos theory in understanding the strategic environment is that it shifts the focus and methods of analysis from disaggregating complex phenomena and examining simple parts to seeing systems as holistic and dynamic. In a much quoted remark, Edward Lorenz used the metaphor of a butterfly flapping its wings in Brazil and eventually causing a tornado in Texas.² Thus a small change or disturbance often is magnified over time, making it impossible to accurately assess events or predict outcomes. Sensitivity to initial conditions—given seemingly insignificant shifts in the course of events—is the hallmark of chaos.

Lessons from attempts at transformation support the theory that organizations that can adapt to constant and often unforeseen change and system perturbations tend to be those that

consistently succeed. Those that are slow to comprehend and adjust to the fluidity of the strategic environment lose their competitive advantage and die. In fact, because information and technologies are rapidly advanced and assimilated, the so-called first-mover advantage is largely short-lived. This issue is managed by industry in part by creating budgetary slack—or fencing a percentage of resources—to quickly pursue promising ideas.

The transition from the industrial age to the post-industrial or information age is underway. Exactly how far the developed world has progressed along the continuum is debatable; but there is general agreement among management experts that large-scale institutional transformation is indeed ongoing. Several emerging phenomena characterize this trend.

Intellectual Capital

In the industrial age the means of production—sources of wealth—were raw materials, technologies, land, and other capital. Today the assets of primary importance and the new source of wealth is intellectual capital. This illuminates an underlying shift in assumptions: critical assets of an organization are not hardware or software but brainpower. Thus in the age of information, employees own the means of production, and obtaining and keeping the best skills may be the most critical factor in determining the viability of an organization.

The Pentagon can learn much from those organizations in the private sector that base their operating assumptions on intellectual capital. Their structures and practices differ from traditional approaches which some see as relatively interchangeable. Individuals are unique strategic assets to be fostered to maximize creative, analytical, and problem-solving skills. Moreover, as workers become more educated and mobile, they operate with greater autonomy and responsibility.

Federation Model

Today innovating commercial organizations operate in a dynamic and collaborative fashion. Their organizing

Reconnoitering in
Afghanistan.



Task Force K-Bar

architecture resembles a federation—many semiautonomous units or teams joined by a common purpose. Power and decisionmaking are balanced between the central authority and individuals in units who are both responsible for the work and accountable for the results. They are provided a budget which they manage themselves. Operating principles tend to be few, simple, and value-centered and are better de-

network arrangements reduce costs by sharing resources that are not needed on a continuous basis

scribed as practices to define operating boundaries and enable adaptability. Decisions on when, where, and how to conduct work are made by unit members, not by managers removed from the work environment.

Semiautonomous, self-governing, and self-budgeting teams may not be easily depicted on organization charts—at least not for any length of time. They may begin with a mission or charter assigned to one individual, who then identifies the best talent inside and outside the organization to accomplish the job. Units are not only

self-governing, but they continually recombine and reorient themselves into new configurations as their role evolves. Members are added and subtracted based on skill sets, and charters may be handed off to different units with different skills in time.

Units build alliances, partnerships, and information networks that are internal and external to the larger organization. Such arrangements transfer knowledge, leverage experience, and extend boundaries of units and eventually parent entities. This aspect enables both units and organizations to operate with the power and knowledge base of a larger corporation, but without the bureaucratic inertia. Pooling resources, partnering, and networking also provide means to spread and manage the risk inherent in new or expanded ventures.

Network arrangements reduce costs by sharing resources that are not needed on a continuous basis. Because cost savings and time to market are critical determinants of commercial

(and government) viability, eliminating outdated or redundant parts of the organization should be routine. This type of organization is supported by procurement practices as adaptable as the overall organization.

The leaders of innovating organizations tend to support the self-organizing, self-managing concepts of a federation through their vision, encouragement, and guidance rather than direct forms of control. This type of leadership can be characterized as coaching. The analogy to a sports team is useful; developing the specialized skill of individual players is paramount to success. The leader establishes the vision and guides progress. His success depends on the ability of team members to maximize their potential and cooperate with others. Professionals perform in teams and trust is key to organizational success.

The hospital also provides an instructive analogy on the individual and organizational level. It works diligently to hire the best specialists it can find, then requires that they continually upgrade their skills. A specialist can work at several hospitals simultaneously, for institutions merely buy services—and only when needed. Moreover, at some point in their careers, specialists do not have to give up practicing a specialty to manage other specialists. That would be wasteful and the loss of a core resource. Instead hospitals hire management specialists to perform this task. This model of advancement within an organization is lateral rather than vertical and based on individual ability to master increasingly complex problems.

Lateral models—coupled with developing creative, imaginative, and continuously educated workers—enable innovative organizations to recognize that neither their knowledge base nor strategic opportunities need be located only in top management. That level may have the least diversity, tolerance for change, and ability to see opportunities and set new directions. Thus the individuals with the greatest vision may not be involved in defining the future of an organization.

The cumulative effect of organizational practices described above is a working environment and culture that rewards imaginative ideas, entrepreneurial performance, and collaborative efforts. These characteristics underpin agile organizations that are adaptable and proactive in defining the strategic environment. Moreover, they are prerequisites to developing innovative technologies and programs and thus sustaining strategic advantage.

Defense Management

These organizational innovations are relevant to defense management, but they require the will to operate effectively in culturally different ways. The development of operational concepts, research and development initiatives, models and practices, and approaches to experimentation and prototyping presents a situation in which individuals on all levels of an organization should make a greater contribution to decisions. Moreover, rigid and centralized decisionmaking may no longer be the model for conducting military operations. A better model might be a centrally-coordinated strategy, statement of mission and objectives, concept of operations, and rules of engagement with a decentralized command structure using semiautonomous, highly maneuverable, adaptive teams. U.S. Special Operations Command already operates under these management practices and could serve as a prototype.

Special Operations Forces are organized into small, agile, autonomous teams which remain attuned and adaptive to changes in the strategic environment. Units operate under simple rules and guiding principles. Inefficient procurement processes are bypassed to meet unit needs. Complete accountability and trust form the basis of their ethos. While unified commands provide centralized planning, mission statement, and guidance, teams accomplish missions in a decentralized manner with heavy reliance on networks, ingenuity, and capability. Not coincidentally, these forces enjoy the highest retention rates in the military.

DOD sorely needs more efficient and effective organizational and operational concepts and a new strategic direction that is more adept at operating in the dynamic realm of information and networks. With rare exceptions, senior leaders who have functioned under the current system and come to believe that challenging that system is harmful to promotion are the least likely to initiate change. Individuals in the middle and lower levels of the organization possess more knowledge, resourcefulness, and ingenuity and could contribute significantly to creating new core competencies to transform the military for the 21st century.

The Armed Forces would benefit by eliminating the up or out policy of career advancement and adopting lateral development to allow individuals

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with valuable skills but less desire to manage others to remain on active duty and enhance their expertise. Countless specialists are lost each year because their opportunities for advancement are less than 5 percent. Lateral promotion similar to practices in industry would enable the retention of trained and educated military professionals. It is a waste of resources to operate under the assumption that everyone must become a senior enlisted manager or a commander or face discharge or retirement.

Decentralization requires a culture of pervasive trust that frees leaders to delegate authority to—instead of power over—subordinates, enabling decisions that implement the shared vision of an organization. Empowering competent subordinates can admittedly lead to mistakes and failures. Though leaders have tried to eradicate the notion of a one-mistake military, there are few signs that it has been eliminated. Of particular note for transformation is the fact that military experimentation is mostly proof of concepts, technology demonstrations, or other mechanisms that validate desired endstates. Generally the process

of discovery and experimental play is not approved for insertion into joint or service experiments and exercises, and the play of hostile forces is designed to enable successful outcomes. For military transformation to be effective in the long term, individuals must believe it is possible to be less than successful in generating concepts and experimentation without jeopardizing their careers. Advancement, rewards, and incentives must reflect the notion that with failure comes learning and better ideas.

As innovative entities in the private sector have adopted new organizing principles, the result has been more efficient, effective operations, reduced or eliminated administrative functions, and fewer senior- and mid-level managerial positions. Alternatively, attempts

at downsizing and reorganizing the defense establishment over the past decade have led to an increased number of senior positions and staff members. Adopting the practices of innovating organizations can bring about efficiencies and a reduction in general officers and senior-level officials. This transformation could lead in turn to greater military effectiveness as additional layers and opportunities for stalemate are shed.

Institutional Transformation

Dynamic systems make it impossible to predict the strategic environment with any degree of certainty beyond the next three or so years. This operating assumption leads defense planners to acknowledge that the intricate procurement process—wherein developing new weapons can be measured in decades—is an inaccurate and risk-laden tool for planning the future structure of the Armed Forces. This core management issue must be addressed early on, as it is one of the most salient obstacles to military transformation.

Longtime success in the private sector can be credited to keeping abreast of the competition and redefining markets to take advantage of



Secretary Rumsfeld pointing the way.

U.S. Army Visual Information Center (Linda Tsang)

change. Likewise, the Office of Force Transformation must keep abreast of the situation by helping to define the operating environment. Systems wane and go through processes of self-renewal and re-creation. And all successful organizations must be reinvented at some point. Lessons from such processes reveal that in nearly every case success followed a carefully phased approach with a focus on developing specific organizational actions.

Opponents of transformation are usually powerful, and the Office of Force Transformation under Admiral Cebrowski must ignite a sense of restlessness with the status quo and instill a sense of urgency. It will require an intense struggle to change military culture and build a constituency. Unfortunately, increases in defense spending—which postpones making strategic choices—only make the process of transformation more difficult. A cut of

30 percent in budget outlays would have compelled the Pentagon to eliminate redundant and legacy systems and pursue programs that provide new core competencies. Competition among the services for resources, and incentives for developing new capabilities, would also facilitate the reallocation of resources.

In the post-9/11 world, the only certainty is that there will be considerable uncertainty over national security. According to the Secretary, the purpose of military transformation is ensuring an ability to deal with unknown challenges over the strategic horizon. The United States has a reputation for technological prowess. Building new weapons systems, developing innovative technologies, and

stocking the military toolbox are necessary but insufficient ways of transforming the Armed Forces. Revolutionary concepts and technological innovations are derived only from a culture that enhances intellectual capital, rewards creative thinking, and reflects dynamic change.

By studying complex adaptive systems, answers to future strategic dilemmas will be found with more heuristic, nonlinear, improvisational, and intuitive methods. This equation must include intangibles. Identifying individuals to function in this setting and share in developing operational plans and strategies is central to sustaining strategic advantage. Complexity teaches that outcomes often are not predictable or preordained. Individuals acting on any level can cause change.

Even though many organizations are struggling to find a purpose, the Armed Forces do not share that fate. Their sense of purpose has not been so vibrant or popular in decades. Like other large organizations moving into the information age, they must endure a bitter metamorphosis by cutting through bureaucratic inertia and instilling an innovative culture. Before the butterfly that Lorenz envisioned can flap its wings in one part of the world and cause a tornado in another, it is borne through a harrowing experience. Its legs fall off, it goes blind, and its body is ripped apart; then it is transformed into a shape more suited to survival. Similarly, military transformation will not be easy. Yet it is necessary to move onto the next plateau of organizational life. It will require vision and courage on the part of senior military and civilian leaders.

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NOTES

¹ Transformation Study Report, "Transforming Military Operational Capabilities," Secretary of Defense report, April 27, 2001.

² Edward Lorenz, *The Essence of Chaos* (Seattle: University of Washington Press, 1993).